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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/717,661	11/21/2003	W. Allan Merz	209127US23	9052

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EXAMINER
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RAEVIS, ROBERT R

ART UNIT	PAPER NUMBER
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2856

DATE MAILED: 06/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/717,661	<b>Applicant(s)</b> MERZ ET AL.	
	<b>Examiner</b> Robert R. Raevis	<b>Art Unit</b> 2856	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 May 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-74 is/are pending in the application.
- 4a) Of the above claim(s) 43-54 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-42, 55-74 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

Election of Group I is acknowledged.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: buckstay 59 (p. 7, line 11). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the limitations of claims 9, 12, 18, 40, 72 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claims 14-16, 74 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 14, "said at least one rotatable support" lacks antecedent basis.

As to claim 74, "said translational member" lacks antecedent basis.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 3, 4, 5, 6, 9, 10, 14, 15, 17, 18, 21, 24, 25, 26, 27, 28, 31, 32, 36, 37, 39, 40, 55, 56, 57, 58, 59, 60, 63, 64, 68, 69, 70, 71, 72 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Legille.

Legille teaches a furnace probe positioning measuring system, comprising: position assembly 13 proximate to the furnace; probe assembly including sensing portion 4 that adjusts position; and measurement device 40/28 that indicates location of sensing portion.

As to claims 5, 27, 59, note the "L" shape of elements 4 and 6 in Figure 1.

As to claims 10, 32, 64, element 4 has an effectively variable length as evidenced by Figures 1-7.

As to claims 14, 15, 36, 37, note rollers 42, 43, 44.

As to claims 17, 39, 71, note rollers 40-44, which support.

As to claims 18, 40, 72 note valve 33 which limits movement.

As to claim 21, while Figure 8 is provided in two dimensions, the probe moves within a furnace that does include three dimensions, and the probe moves in a position within the three dimensional region furnace.

As to claim 28, the location sensing portion always maintains a straight configuration.

As to claims 57, 58, note that the elements 4 and 6 are connected together, and thus are linearly displaced together.

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7,8,13,16,29,30,38,42,61,62,70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Legille.

As to claims 7,8,29,30,61,62 while a particular material of construction of the probe is not described, it would have been obvious to employ a steel probe to assure that the probe does not flex during measuring, allowing for a proper measurement.

As to claim 13, structure 50 demands a support.

As to claims 16,38,70, it is known to apply "v" type wheels/rollers to securely guide/drive longitudinally members, suggestive of application of such wheels/rollers in the case where (generic) rollers are called for.

As to claim 42, it would have been obvious to replace parts in the event of damage/wear, suggestive of interchangeability.

Claims 1,13,20 is rejected under 35 U.S.C. 102(b) as being anticipated by Murakawa et al.

Murakawa et al teach a system, including: position assembly 23 next to a furnace; probe assembly 22 with location sensing portion 24 that adjusts to a location of a furnace; and measurement device 30 connected to the location sensing portion. The member 28 moves inside element 22 in telescopic fashion, as evidences n Figure 6.

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Claims 1,11,12,19,55,65,66,67,73,74,33,34,35,21,23 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Jankkila.

Jankkila teaches a probe, including: position assembly 1; probe assembly 7 with location sensing end; and measurement device 14.

As to claims 11,65,33,34 note cylinder 6 which houses a piston rod.

As to claims 12,66, the device is operatively connected to the furnace.

As to claim 19,73,74,41 note that the rod 7 slides in bearings 8, 9.

As to claims 35, 67, note supports 7 and 15.

As to claim 21, while Figure 8 is provided in two dimensions, the probe moves within a furnace that does include three dimensions, and the probe moves in a position within the three dimensional region furnace.

As to claim 23, note the electrode in the furnace.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Janakkila.

Janakkila does not relate the measurement of position to measurement of wear.

As to claim 22, it would have been obvious to measure wear with Jankkila probe because Applicant describe (p. 1 of written specification) that wear measurements are necessary to schedule maintenance.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Griffith et al and Monaghan measure inside furnaces with probes.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert R. Raevis whose telephone number is 571-272-2204. The examiner can normally be reached on Monday to Friday from 7am to 4pm. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



RAEVIS